

REMARKS

Claims 1-26 are currently pending, with claim 1 being in independent form. Claims 1, 6, 11, 12, 14, 17, 18, and 22-24 have been amended. Claim 2 has been cancelled without prejudice or disclaimer of subject matter. New claims 25 and 26 have been added. No new matter has been added.

Interview Summary

The Applicants' undersigned representative thanks Examiner Wasaff for the courtesy of the telephonic interview conducted on December 21, 2010. During the interview, participants discussed the feature of "forming a homogenous melt" and the Applicants Admitted Prior Art. The substance of the interview is reflected in the preceding amendments and the following remarks.

Claim Objections

The non-final Office Action objected to claims 11, 12, 17, 18, and 22-24 for a language informality. Claims 11, 12, 17, 18, and 22-24 have been amended as suggested by the Office Action. Therefore, Applicant respectfully requests withdrawal of the claim objections.

Claim Rejections – 35 U.S.C. § 112

In the non-final Office Action, claims 1-24 were rejected under 35 U.S.C. § 112, second paragraph. With regard to the section 112 rejections of claims 2 and 4, the non-final Office Action asserts that the phrases "solid feed materials" and "free carbon" are unclear. Office Action, p. 3. Applicant respectfully disagrees.

Applicant notes that if the language of the claim is such that a person of ordinary skill in the art could interpret the metes and bounds of the claim so as to understand how to avoid infringement, a rejection of the claim under 35 U.S.C. 112, second paragraph, is not appropriate. See M.P.E.P. § 2173.02 (2010). Applicant asserts that the phrases "solid feed materials" and "free carbon" would allow a person of ordinary skill in the art to interpret the metes and bounds of the claim. For example, "solid feed materials" may regard any solid material "that could be

fed (i.e., added) to the melt,” and “free carbon” may regard any source of carbon that is not bound. *See* Office Action, p. 3. “Breadth of a claim is not to be equated with indefiniteness.” M.P.E.P. § 2173.04.

With regard to the section 112 rejections of claims 1, 6, and 14, Applicant has amended the claims to remove the phrase “such as.” Therefore, Applicant respectfully requests withdrawal of the section 112 rejections of claims 1-24.

Claim Rejections – 35 U.S.C. §§ 102 & 103

In the non-final Office Action, claims 1-3, 6, 11-13, 15, 17-20, 22, and 23 were rejected under 35 U.S.C. § 102 over “applicant’s admitted prior art” (AAPA); claims 4, 5, 7, 8, 10, 14, 16, 21, and 24 were rejected under 35 U.S.C. § 103 over AAPA in view of U.S. Patent No. 3,862,840 (Nayar); and claim 9 was rejected under 35 U.S.C. § 103 over AAPA in view of U.S. Patent No. 3,663,313 (Oberly). Applicants respectfully request withdrawal of the rejections for at least the following reasons.

Independent claim 1 recites, in part, “melting at least two solid feed powders to form a homogeneous melt, the homogeneous melt having a required concentration of carbon, chromium and manganese for a chromium carbide-containing ferroalloy welding consumable material.” The “applicant’s admitted prior art” does not describe or suggest this feature.

The specification describes “a typical blend of high carbon ferrochromium (HCFeCr) and high carbon ferromanganese (HCFeMn) powders” and a “typical prior art hardfaced weld deposit.” *See* Specification, p. 2, lines 12-16; p. 3, lines 21-28. However, rather than describing melting at least two solid feed powders, the specification clearly states that “[t]he above-described prior art blend of ferroalloy powders is obtained by mechanically mixing the HCFeCr and HCFeMn powders together.” Specification, p. 5, lines 30-32 (emphasis added). The specification goes on to describe that “[m]echanical mixing is a slow and inefficient means of obtaining a homogenous powder blend.” Specification, p. 5, lines 32-34. Therefore, the “applicant’s admitted prior art” does not describe or suggest “melting at least two solid feed powders to form a homogeneous melt, the homogeneous melt having a required concentration of carbon, chromium and manganese for a chromium carbide-containing ferroalloy welding consumable material,” as recited in claim 1.

Nayar does not cure the deficiencies of the “applicant’s admitted prior art” with regard to the above-described features of claim 1. Nayar describes a process for manufacturing hard and non-deformable alloys by subjecting powders contained in a mold “to a heating schedule which brings about direct particle liquid phase sintering of the contained powders.” However, Nayar specifically describes that “[a]t the sintering temperature, [only] a portion of the powder melts to give the desired liquid phase.” Nayar, col. 5, lines 5-6. Rather than melting at least two solid feed powders to form a homogeneous melt, as claimed, Nayar Creates a partial-melt state at a sintering temperature. The point of the partial-melt described by Nayar is to distribute the liquid phase to cover the solid, non-melted particles. *See* Nayar, col. 5, lines 6-9. Nayar does not describe or suggest a homogeneous melt. Moreover, Nayar does not describe or suggest that its liquid phase has “a required concentration of carbon, chromium and manganese for a chromium carbide-containing ferroalloy welding consumable material,” as recited in claim 1.

Oberly similarly fails to cure the deficiencies of the “applicant’s admitted prior art” with regard to the above-described features of claim 1. Oberly merely describes “a bonded submerged arc flux composition.” Oberly, col. 1, lines 36-37. The composition described by Oberly is made by thoroughly dry blending sized materials. *See* Oberly, col. 2, lines 52-61. “The mixture is passed through a rotating kiln where it is heated to a temperature between 1,450° F. and 1,800° F.” *Id.* Oberly describes that “[a]t these temperatures, . . . [t]he CaO is saturated and coated by the liquefied and molten silicate binders.” *Id.* In other words, Oberly only describes a partial melt, similar to Nayar, that is used for coating CaO with liquefied and molten silicate binders. Therefore, Oberly does not describe or suggest a homogeneous melt, as recited in claim 1. Moreover, Oberly does not describe or suggest that its liquid phase has “a required concentration of carbon, chromium and manganese for a chromium carbide-containing ferroalloy welding consumable material,” as recited in claim 1. In fact, the Office Action only relies upon Oberly for “teach[ing] welding flux composition that describes removing slag.” Office Action, p. 7.

Therefore, Applicants request withdrawal of the section 102 and 103 rejections of claim 1 and its rejected dependent claims.

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Conclusion

The Applicants do not acquiesce to the Examiner's characterizations of the art, and reserve the right to address the characterizations of the art in further prosecution of this or a subsequent application. The absence of an explicit response by the Applicants to any of the examiner's positions does not constitute a concession of the examiner's positions.

It is hereby petitioned that the period for response to the Office Action be extended for three (3) months. The fee in the amount of \$555.00 in payment of the three-month extension of time fee and the fee in the amount of \$26.00 in payment of the excess claims fee are being paid concurrently herewith on the Electronic Filing System (EFS) by way of Deposit Account authorization. Please apply any charges or credits to deposit account 06 1050.

Respectfully submitted,

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